

**AMENDMENTS TO THE CLAIMS:**

1-9: (canceled)

10. (currently amended) A method of selecting for human leukemia stem cells (LSC), the method comprising:

combining reagents that specifically recognize Thy-1, IL-7R $\alpha$  (CD127), [[and]] a lineage panel that distinguishes progenitor cells from lineage committed cells, and one or more reagents selected from a reagent that specifically recognizes IL3R $\alpha$ , a reagent that specifically recognizes CD45RA, a reagent that specifically recognizes CD47 and a reagent that specifically recognizes Flk2 with a blood sample from a human leukemia patient suspected of comprising LSC; and

selecting for cells that are Thy-1 $^+$ , IL-7R $\alpha$  (CD127) $^+$ , [[and]] lineage panel, and one or more of IL-3R $\alpha^+$ , CD45RA $^+$ , CD47 $^+$  and Flk2 $^+$ , to provide a population of leukemia stem cells having self-renewal capacity.

11.-16. (canceled)

17. (currently amended) The method according to Claim 15 Claim 10, wherein said leukemic condition leukemia is a myeloid leukemia.

18. (currently amended) The method according to Claim 15 Claim 10, wherein said myeloid leukemia is CML or CMML.

19-35. (canceled)

36. (currently amended) The method of Claim 10, further comprising:

combining said blood sample with a reagent that specifically recognizes IL3R $\alpha$ ; and selecting for cells that are IL3R $\alpha^+$ .

37. (currently amended) The method of Claim 10, further comprising:

combining said blood sample with a reagent that specifically recognizes CD45RA; and selecting for cells that are CD45RA $^+$ .

38. (previously presented) The method of Claim 10, wherein the leukemia stem cells have an activated  $\beta$ -catenin pathway that is inhibited with axin.

39. (currently amended) The method of Claim 10, ~~further~~ comprising: combining said blood sample with a reagent that specifically recognizes CD47; and selecting for cells that are CD47 $^{+}$ .

40. (currently amended) The method of Claim 10, ~~further~~ comprising: combining said blood sample with a reagent that specifically recognizes Flk2; and selecting for cells that are Flk2 $^{+}$ .

41. (new) The method of claim 10 wherein said selecting is performed by flow cytometry

42. (new) The method of any of claims 10, 17, 18 or 36-41 wherein at least one reagent is an antibody.

43. (new) The method of claim 41 wherein the antibody is labeled for direct detection.

44. (new) The method of claim 39 wherein the reagent that specifically recognizes CD47 is an antibody.

45. (new) The method of claim 44 wherein the antibody is labeled for direct detection.

46. (new) The method of claim 39, wherein said leukemia is CML or CMML.